

CERTIFICATION UNDER 37 CFR 1.10

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Cheri Gomez
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors: Kowallis, Reid B. Examiner: Handy, D.

Serial No: to be assigned Art Unit: 1743

Filed: December 12, 2001 (herewith)

Title: **APPARATUS AND METHOD FOR TRANSFERRING SMALL VOLUMES OF SUBSTANCES**

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D. C. 20231

Sir:

In the Specification:

In the first page of the specification after the title and before "Field of the Invention," please insert the following paragraph:

-- Cross Reference to Related Applications

The present application is a continuation of U.S. Patent Application serial number 09/846,467, filed April 30, 2001, which is a divisional application of U.S. Patent Application serial number 09/293,659, filed April 16, 1999, now issued as U.S. Patent No. 6,245,297, which are incorporated herein by reference.--

In the Claims:

Please cancel claims 1-28, without prejudice.

Please insert the following new claims:

--29. (New) A spotting system, comprising:

a base including one or more areas adapted to hold one or more reagents;
a conveyor positioned over said base, said conveyor including a surface defining (i) a plurality of substrate-support areas for holding or containing substrates to be spotted with said one or more reagents, and (ii) a plurality of openings permitting access to said one or more base areas;

a transfer head which is movable along an axis for obtaining reagents from the base through said openings in the conveyor surface; and

one or more controllers for controlling the movement of the conveyor and the transfer head.

30. (New) The system of claim 29, wherein an elongate flexible belt defines said conveyor.

31. (New) The system of claim 29, which further includes one or more additional transfer heads disposed at spaced positions along said conveyor.

32. (New) The system of claim 31, wherein at least one of said transfer heads is laterally offset from the other transfer heads.

33. (New) The system of claim 31, wherein a plurality of transfer heads are disposed in a row extending laterally or obliquely across the conveyor surface at one or more of said spaced positions.

34. (New) A reagent-manipulation apparatus, comprising:

a conveyor including a surface with a plurality of spaced, tandemly-arranged substrate-support regions, each adapted to support a substrate, said conveyor surface defining an opening between each adjacent pair of substrate-support regions;

a base located under the conveyor and adapted to hold one or more reagents;

a transfer head being mounted for movement along an axis, between a raised position at which the head is disposed above the conveyor surface and a lowered position whereat the head can contact said one or more reagents; and

one or more controllers for controlling the movement of the conveyor and transfer head.

35. (New) The system of claim 34, wherein an elongate flexible belt defines said conveyor.

36. (New) The system of claim 34, which further includes one or more additional transfer heads disposed at spaced positions along said conveyor.

37. (New) The system of claim 36, wherein at least one of said transfer heads is laterally offset from the other transfer heads.

38. (New) The system of claim 36, wherein a plurality of transfer heads are disposed in a row extending laterally or obliquely across the conveyor surface at one or more of said spaced positions.

39. (New) A method for accessing a reagent held at a reagent-supply location, under a plurality of spaced substrates, comprising:

(i) advancing said plurality of spaced substrates along a transport pathway extending over said reagent-supply location; and

(ii) from a position over said reagent-supply location and said pathway, extending a reagent-transfer instrument through an intervening region separating an adjacent pair of said substrates to contact said reagent held at said reagent-supply location.--

REMARKS

Claims 1-28 have been cancelled, without prejudice. New claims 29-39 have been added. Support for the new claims can be found, for example, as follows:

29, 34: original claims 1, 16, and 17; Figures 1, 2, 3, and 5, and the accompanying portions of the specification; page 3, line 20 - page 4, line 11 of the application; page 6, line 21 - page 8, line 6 of the application; page 11, lines 1 - 17 of the application.

30, 35: original claim 15; Figures 1, 2, and 3, and the accompanying portions of the specification; page 8, lines 7 - 8 of the application; page 8, line 29 - page 9, line 1 of the application; page 11, line 18 - page 12, line 1 of the application.

31, 36: original claim 2; page 4, lines 12 - 17 of the specification; page 21, line 6 to page 22, line 3 of the application.

32, 37: original claim 3; page 4, lines 17 - 19 of the application.

33, 38: original claim 4; page 4, lines 20 - 22 of the application.

39: original claim 19; Figures 1, 3, and 5, and the accompanying portions of the specification; page 8, lines 11 - 17 of the application; page 19, line 18 - page 21, line 5 of the application.

Entry of the present amendment and examination is requested.

If any additional fees not submitted with this response are required, the Commissioner is authorized to withdraw such fees from deposit account number **01-2213**.

Respectfully submitted,

Date: Dec. 12, 2001



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